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TELEMEDICINE AND TELEHEALTH

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This backgrounder describes the use of telemedicine and telehealth to deliver health care services. Telemedicine and telehealth are viewed as a means of improving access to care, particularly for people (1) living in rural areas where doctors and specialists are in short supply or (2) who have difficulty gaining access to face-to-face care.

SUMMARY

There are no universal definitions of "telemedicine" and "telehealth," and the terms are sometimes used interchangeably. According to the American Telemedicine Association (ATA), "telemedicine" uses medical information exchanged from one site to another using electronic communications with overall goals of improving patient health and reducing related costs. "Telehealth" is an umbrella term that the federal Office for the Advancement of Telehealth distinguishes from telemedicine because it is primarily used for non-clinical purposes, such as sharing patient and professional health-related educational information and providing health administration services.

Practitioners use telemedicine and telehealth to improve patient health at lower cost by using them to facilitate two-way communication between patients and physicians or practitioners located elsewhere.

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The federal government is a major user of telemedicine and telehealth technology both as a (1) provider of health care services (for example, through the departments of Defense and Veterans' Affairs, the National Aeronautics and Space Administration, and the Department of Health and Human Services' Indian Health Service) and (2) funder of private sector providers (for example, through Medicare and Medicaid and grants to community health centers and other providers). Medicare and Medicaid programs often use these methods to reach uninsured and underserved people, particularly those who have difficulty obtaining traditional health care because of financial, geographic, cultural, or physical limitations.

Additionally, at least 17 states, although not Connecticut, require insurers to pay for appropriate services delivered via telemedicine (see Table 1, below).

BACKGROUND: TELEMEDICINE AND TELEHEALTH SERVICES

Purposes

Telemedicine and telehealth transmissions are used for many purposes. These include (1) continuing medical information for health professionals and special seminars for targeted groups in remote locations, (2) consumer medical and health information, and (3) on-line discussion groups to provide peer-to-peer support. They also include specialist referrals, consultations, and monitoring patients remotely (e.g., from their homes).

Specialist referral services typically involve a specialist assisting a general practitioner in rendering a diagnosis. This may involve (1) providing care from a remote location via live video or other means or (2) transmitting diagnostic images or video together with patient data to a specialist for viewing later. The latter transmission method is referred to as "store and forward." Telemedicine can also allow specialists to consult with each other and the patient's primary care physician.

Transmissions may use a direct link from a remote clinic to a physician's office or take place over the Web. The health care professional may use this data to diagnose a patient's condition or create an individualized health care plan.

Remote patient monitoring uses devices to remotely collect and send data, often from a patient's home, to a monitoring station for interpretation. Such "home telehealth" applications might include a specific vital sign, such as a blood glucose level or heart rate, or a variety of indicators for homebound patients. Such services can be used in conjunction with visiting nurses.

Delivery Mechanisms

Delivery mechanisms for telemedicine and telehealth services include computer and broadband networking, point-to-point use of private networks, connections between providers and patients' homes, the Internet, and smart phone applications (apps).

Networked programs link hospitals and clinics with outlying clinics and community health centers in rural or suburban areas. The links may use dedicated high-speed lines or the Internet for telecommunication links between sites. The U.S. Department of Health and Human Services, private vendors, and assessments by ATA of its membership estimate that there are approximately 200 existing telemedicine networks in the United States. About half are estimated to be actively providing patient care services. The remainder are only occasionally used for patient care and are primarily used for administrative or education-related functions.

Hospitals and clinics use private networks with point-to-point connections when they deliver services directly or contract out specialty services to independent medical service providers at ambulatory care sites. Radiology, mental health, and intensive care services are among the medical specialties that are using telemedicine transmissions to communicate directly with independent service providers and private contractors.

Primary care providers, specialists, and home health nurses can use single-line, phone-video systems for interactive clinical consultations with patients. They can also use home-to-monitoring-center links for cardiac, pulmonary, or fetal monitoring and home care-related services to patients in place of office visits. Often normal phone lines are used to communicate directly between patients and the centers, although some systems use the Internet.

Web-based e-health patient service sites provide direct consumer outreach and services over the Internet. Under telemedicine, these include sites that provide direct patient care.

Smart phone apps have become a much-discussed method of delivering health services to consumers and practitioners. According to the June 27, 2012 edition of *USA Today,* there are 40,000 medical apps available for smartphones and tablets. Some of these are simply used by individuals but others involve data transmission to central servers and interaction with app developers. Such apps serve many purposes, such as monitoring blood pressure, delivering medication reminders, or quickly determining patients' Medicare eligibility.

Medical Specialties Using Telemedicine

The number of specialty and subspecialty areas that have successfully used telemedicine has increased over time. Radiology continues to make the greatest use of telemedicine with thousands of images "read" by remote providers each year. Other major specialty areas include dermatology, ophthalmology, mental health, cardiology, and pathology.

TELEMEDICINE AND TELEHEALTH IN MEDICARE AND MEDICAID

The federal government is a major user of telemedicine and telehealth technologies through its Medicare and Medicaid programs.

Medicare

Medicare is the federal health insurance program for people age 65 or older, certain younger people with disabilities, and people with end-stage renal disease. It pays providers directly for covered services and has paid a fixed rate for telehealth services since 1997. Payment rules have loosened and permissible uses have increased over time. The program currently covers a wide range of telemedicine and telehealth services, originating sites (i.e., locations where patients are while the services are being provided), and distant-site health care providers.

Medicare Part B (the portion of the program that covers physician and outpatient services) pays for some types of telemedicine services as substitutes for face-to-face encounters. Patients must be at approved originating sites and an interactive audio and video telecommunications system must be used that permits real-time communication between the patient and approved practitioners at distant sites.

The program does not cover services provided via "store and forward" delivery methods, such as those involving email or web applications sent to specialists for interpretation at a later time. X-rays and images of pathology specimens are examples of clinical data frequently transmitted in this manner.

Covered Services. Part B covers the following services when delivered in "real-time" from remote locations:

1. emergency room or initial inpatient consultations;

2. follow-up consultations on patients in hospitals or nursing homes;

3. office and other outpatient visits;

4. one visit every (a) three days for hospitalized patients and (b) 30 days for nursing home residents;

5. individual and group (a) diabetes self-management training (after adequate in-person instruction has been completed), (b) health and behavior assessments and interventions, (c) kidney disease education, and (d) medical nutrition therapy;

6. psychotherapy, psychiatric diagnostic interviews, and neurobehavioral status examinations;

7. medication management;

8. smoking cessation; and

9. certain types of end-stage renal disease treatment (after hands-on visit requirements have been met).

Approved Originating Sites. Approved originating sites for telemedicine and telehealth services are:

1. physicians' and other authorized practitioners' offices;

2. hospitals, including critical access hospitals, and hospital-based renal dialysis centers;

3. rural health clinics;

4. community mental health centers; and

5. nursing homes.

Originating sites must be located in federally designated, rural health professional shortage areas or outside metropolitan statistical areas (i.e., not in urban areas) unless they have been participating in a demonstration program administered by, or receiving demonstration project funding from, the U.S. Department of Health and Human Services since December 31, 2000.

Approved Distant Site Practitioners. Subject to state licensure and scope-of-practice laws and regulations, practitioners who may provide Medicare-covered telemedicine services at distant sites are (1) health care providers, including physicians; nurse practitioners and midwives; physician assistants; clinical nurse specialists; and, in some circumstances, clinical psychologists and social workers and (2) registered dieticians.

Medicaid

Medicaid is the state and federal partnership that pays for health care for people with low incomes and few assets, the elderly, people with disabilities, and some families with children. States qualify for federal matching funds (usually 50% of Medicaid-covered expenditures) for services delivered using telemedicine and telehealth technologies, so long as they satisfy federal, efficiency, economy, and quality-of-care requirements.

Eligibility rules and provider payment rates differ from state to state. Medicaid does not expressly reimburse states for telemedicine and telehealth services but guidance from the federal Centers on Medicare and Medicaid Services (CMS), the entity that administers the federal portion of the program, indicates that states can (1) roll telemedicine and telehealth costs into provider payment rates; (2) pay distant and originating site providers separately, or (3) claim them as administrative costs associated with services such as technical support, transmission, and equipment charges.

CMS guidelines also specify that states can deliver services using telecommunications or electronic technologies that are not traditionally considered "telemedicine" but fall within the term "telehealth." One of the most frequently used examples in the latter category are "store and forward" transmissions.

At least 35 states' Medicaid programs use telemedicine, telehealth, or both, as a means of delivering covered services. They are: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Covered Services, Approved Sites, and Distant Site Practitioners. Unlike Medicare program rules, CMS Medicaid guidelines give states flexibility to determine (1) what types of transmission methods and services to cover and how much to pay for them; (2) which originating sites to approve, along with restrictions on where they may be located (e.g., only in rural areas); and (3) the types of distant-site practitioners and providers whose services they will cover. Providers and other practitioners must meet state practice and licensing standards and satisfy federal statutory and regulatory requirements.

States may pay distant-site providers different rates than they pay for face-to-face encounters. Those intending to adopt differential rates must get CMS permission and amend their Medicaid plans accordingly.

STATE LEGISLATION ON TELEMEDICINE

Legislation has been adopted in at least 17 states, including Connecticut, on telemedicine. As described in Table 1, the most common topic is the coverage of telemedicine services by insurers and state Medicaid programs. Other legislation establishes pilot programs and specifies how telemedicine is treated for professional licensing purposes.

Legislation in Connecticut

PA 12-109 allows Connecticut's Department of Social Services (DSS) commissioner to establish a Medicaid telemedicine demonstration program at federally qualified health centers. These centers provide "safety-net" services in underserved urban and rural communities. Their primary purpose is to expand access for uninsured and underserved populations who experience financial, geographic, or cultural barriers to care. Carolyn Treiss, the DSS legislative liaison, reports that the agency has no immediate plans to develop such a program.

PA 96-148 requires physicians from other states performing diagnostic or treatment services for state residents through electronic communications or interstate commerce on a regular, ongoing, or contractual basis to be licensed in Connecticut. Treatment services include primary diagnosis of pathology specimens, slides, or images (CGS § 20-9).

Other States

Table 1: State Telemedicine Insurance and Medicaid Coverage Provisions

State	***Citation***	***Provision***
California	Cal. Health and Safety Code, § 1374.13	California requires all health care service plans to cover services that can be adequately provided through telemedicine. The law lists the standards which health care service plans must meet. It requires that state Medicaid managed care program plans also cover telemedicine service.
Colorado	Col. Rev. Stats, § 10-16-123)	In Colorado's health benefit plans, face-to-face contact between a patient and a provider is not required for services that can appropriately be provided through telemedicine services. Affected patients must live in counties with populations of 150,000 or less. The law provides for telemedicine reimbursement in the state's medical assistance programs for home health care services or home- and community-based services that are otherwise eligible for reimbursement. Any cost savings resulting from the use of telemedicine may be used to pay for home health care or home- and community-based services.
Georgia	Ga. Code § 33-24-56.4	Every health benefit policy issued, amended, or renewed in Georgia on and after July 1, 2005 must pay for services that are covered under the policy and appropriately provided through telemedicine in accordance with state law and generally accepted health care practices and standards prevailing in the applicable professional community at the time the services were provided. The state code defines telemedicine as the practice, by a duly licensed physician or other health care provider acting within the scope of his or her practice, of health care delivery, diagnosis, consultation, treatment, or transfer of medical data by means of audio, video, or data communications used during a medical visit with a patient or visit with a patient. Standard telephone, facsimile transmissions, and unsecured e-mail do not constitute telemedicine services.

State	Citation	Provision
Hawaii	Hi. Rev. Stat. § 431:10A-116.3, § 432:1-601.5 , § 432D-23.5	Hawaii requires all health, accident and sickness, mutual benefit society, and HMO plans to cover telehealth services that can appropriately replace a face-to-face contact between the health care provider and patient. While a health care provider-patient relationship is required before reimbursement is provided for the services, the relationship may be established by a telehealth mechanism. It defines "telehealth" as the use of telecommunications services, including real-time video conferencing-based communication, secure interactive and non-interactive web-based communication, and secure asynchronous information exchange, to transmit patient medical information, including diagnostic-quality digital images and laboratory results for medical interpretation and diagnosis, for the purpose of delivering enhanced health care services and information to parties separated by distance. But standard telephone contacts, facsimile transmissions, or e-mail text do not constitute telehealth services.
Kentucky	Ky. Stats. § 304.17A-138	The state requires health benefit plans to cover telehealth services and bars insurers from charging higher deductibles for the telehealth services than for the same services provided through a face-to-face consultation. Telehealth services will not be reimbursed for data or clinical information transmitted solely via audio-only telephone, fax, or e-mail.
Louisiana	LA. Stat. § 22:1821	Louisiana law requires all health benefit policies issued after June 16, 1995 to cover and reimburse for telemedicine services. Reimbursements cannot be less than 75% of the rates they pay for equivalent face-to-face consultations.
Maine	24-A Me. Rev. Stat. § 4315	A carrier offering a health plan in Maine may not deny coverage because a service is provided through telemedicine if it would be covered were it provided through in-person consultation between the covered person and a health care provider. Coverage for services provided through telemedicine must be determined in a manner consistent with coverage for services provided through in-person consultations. Carriers can offer plans that impose deductibles, copayments, or coinsurance payments for covered telemedicine services as long as the payments do not exceed those they charge for similar in-person consultations.

State	Citation	Provision
New Hampshire	N.H. Gen. Laws ch. 415-J.	The law bars health insurers from denying coverage solely because it is provided via telemedicine if the service would be covered if through an in-person consultation.
Oklahoma	OK Stat. §36-6801	All Oklahoma health care service plans and disability, workers' compensation, and Medicaid managed care program contracts must cover telemedicine services, where appropriate. A health care practitioner makes this determination.
Oregon	Ore. Rev. Stat. §743A.058	The state's health benefit plans must cover telemedical health services if the (a) plan covers the health service when provided in-person by the same type of health professional; (b) service is medically necessary; and (c) service does not duplicate or supplant one that is available to the patient in person. Insurers can subject coverage to the terms and conditions of the covered person's policy. Services can originate at a hospital, physician's office, skilled nursing facility, or other specified locations.
Texas	Tex. Insurance Code, § 1455,	The Texas law requires all health benefit plans to cover telemedicine services, subject to some exceptions, most notably for small employer plans.
Virginia	Va. Acts 2010, ch. 222.	Virginia health insurers, health care subscription plans, and HMOs must cover telemedicine services when they are appropriately provided through such means. "Telemedicine services" means the use of interactive audio, video, or other telecommunications technology by a health care provider to deliver health care services at a site other than the site where the patient is located, including the use of electronic media for consultations relating to the health care diagnosis or treatment of the patient. Telemedicine coverage denials are to subject to utilization review (appeal) procedures.

Other Provisions

At least eight states have adopted telemedicine laws that deal with such things as provider licensure for the provision of telehealth services, pilot programs, and parity in how insurers cover face-to-face encounters and those involving telemedicine transmissions.

California. In 2011, the legislature passed SB 849, which provides funding for the Department of Corrections and Rehabilitation to establish an infrastructure to allow prisons to track and share patient information electronically, and installing a new telemedicine network in the state prison system. The cost to develop the various projects was $235 million in 2010-11 and will exceed $800 million over five years.

Hawaii. The law specifies that that telehealth is within the scope of a physician's practice and a provider-patient relationship may be established through telehealth where the provider is licensed to practice in Hawaii (Hi. Rev. Stat. § 453-1.3).

Louisiana. HB 1384, adopted in 2008, defines and authorizes the interstate practice of telemedicine and authorizes the Board of Medical Examiners to issue telemedicine licenses (La. Rev. Stat. § 37.1276.1).

Mississippi. Legislation passed in 2011 (SB 2446) specifies that the definition of the practice of psychology applies regardless how a service is provided, i.e., face-to-face, over the Internet, or by telehealth (Miss. Code Ann. § 73-312).

Nevada. AB 370, adopted in 2007, authorizes the establishment of remote sites and satellite consultation sites for the dispensing of prescriptions and tele-pharmacies, which are connected to such sites by computer link, video and audio links to enable a registered pharmacist or a dispensing practitioner at the tele-pharmacy to oversee the dispensing of prescriptions to patients at a remote site or satellite consultation site. A remote site or satellite consultation site must be at least 50 miles from the nearest pharmacy and in a service area with a total population of less than 2,000. Such sites may be operated by a pharmaceutical technician or a dispensing technician (Nev. Rev. Stat. § 639.0154 et seq.).

Oklahoma. The law specifies that before health care can be provided by telemedicine, the health care practitioner who is in physical contact with the patient must have the ultimate authority over the care of the patient and obtain his or her informed consent (Ok. Stat. §36-6804)). The informed consent procedure must ensure that specified information is given to the patient, including:

1. a statement that the individual retains the option to withhold or withdraw consent at any time without affecting the right to future care or treatment or risking the loss or withdrawal of any program benefits to which the individual would otherwise be entitled;

2. a description of the potential risks, consequences, and benefits of telemedicine; and

3. a statement that all existing confidentiality protections apply.

The patient must sign a written statement before the health care is delivered via telemedicine indicating that the patient understands this information and that this information has been discussed with the health care practitioner or the practitioner's designee. The consent statement signed by the patient becomes part of the patient's medical record.

The failure of a health care practitioner to comply with these provisions constitutes unprofessional conduct.

Tennessee. SB 773, adopted in 2011, requires telecommunications carriers to provide discounts for telemedicine centers, as well as hospitals and certain other facilities.

Washington. Legislation adopted in 2010 (SB 5708) allows nonresidents of boarding homes to receive technology-based monitoring devices, scheduled blood pressure checks, reminders about health care appointments, medication assistance, assessments of their risk of falling, and nutrition management and education services, dental services, and wellness programs. The boarding home must inform residents in non-licensed rooms that certain protections and services are available to licensed beds that do not apply to such services (Rev. Code Wash. § 18.20.030).

SOURCES

American Telemedicine Association
http://www.americantelemed.org/i4a/pages/index.cfm?pageID=3604

National Conference of State Legislatures
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